I. EXECUTIVE SUMMARY/ FORMAL PROPOSAL (PHASE 1)

a. Project Title and Applicant Name -- Richter Brothers Anadromous Fish Screen Project, Richter Brothers

b. **Project Description and Primary Biological/Ecological Objectives**

Project Description: The existing pumped diversion facilities include three inclined pumps that divert water from the Sacramento River for irrigation east of the river. The existing facility includes three equal-sized pump/motor units having a total combined capacity of approximately 25 cfs. Two of the units are owned and operated by Richter Brothers (Richter), the third unit is owned and operated by Emile and Simone Furlan (Furlan). The two units belonging to Richter are required to have fish screens by directive from the State Water Resources Control Board.

This requirement is a condition associated with Richter's change in its point of diversion. Furlan is not required to screen its diversion at this time, however, Furlan is interested in contributing to the overall effort to restore anadromous fisheries in the Sacramento River system and would incorporate its diversion into a screened intake in common with Richter.

Primary Biological/Ecological Objectives: This project is to design and construct a positive-barrier fish screen to benefit multiple fish species in the Sacramento River by reducing entrainment and increasing production.

Direct mortality to fisheries resources due to entrainment into diversion pumps can occur as a result of unscreened diversions. Salmon fry and smolts are particularly susceptible to impacts from unscreened diversions. The significance of this stressor on fish populations varies depending on the size, location, type, duration, and timing of the diversion. Screening of diversions of all sizes is a documented near-term restoration action that can further reduce entrainment and contribute to increased production of salmon from the Sacramento River system. Design and construction of a positive-barrier fish screen at this diversion will provide immediate benefits to anadromous fish including winter-run, fall-run, late fall-run, and spring-run chinook salmon and steelhead. This project will also benefit multiple fish species in the Sacramento River including the resident Sacramento splittail, green, and white sturgeon. Installation of a positive-barrier fish screen at this location will contribute to the cumulative long-term ecological and biological health of the Sacramento River fishery by reducing mortality at critical life stages of both resident and migratory fish.

c. **Approach/Task/Schedule**

Approach: Richter Brothers approach to implementing its Fish Screen Project involves two phases, with the goal of completing construction in 1998. Phase 1 is to evaluate alternatives for screening its diversion and completing the environmental documentation. Phase 2 is to obtain the necessary permits and prepare plans and specifications for construction of the preferred alternative. Borcalli & Associates, Inc., was selected to assist Richter to manage the project, specifications, handle all permits and environmental documentation, prepare the construction plans, and subcontract for construction and installation of equipment.

Task - Specific tasks to be performed under Phase 1 include

- Perform Project Management for Engineering and Construction
- Coordinate with the Anadromous Fish Screen Program Technical Team and Regulatory and Funding Agencies
- Identifying and Evaluate Alternatives to Screen and Select a Preferred Alternative
- Prepare Environmental Documentation for CEQA NEPA Compliance
- Obtain Permits
- Perform Surveys for Preliminary Design

Schedule: The Phase 1 and Phase 2 work is scheduled to complete construction in the summer of 1998. The preconstruction work including the evaluation of alternatives, selecting the preferred alternative, and performing environmental documentation to comply with CEQA and NEPA will be completed in the fall and winter of 1997.

d. **Justification for Project and Funding by CALFED** -- Direct mortality to fisheries resources due to entrainment into diversion pumps can occur as a result of unscreened diversions. Salmon fry and smolts are particularly susceptible to impacts from unscreened diversions. The significance of this stressor on fish populations varies depending upon the size, location, type, duration, and timing of the diversion. However, screening of diversions of all sizes is a documented near-term restoration action that can further reduce entrainment and contribute to increased production of salmon from the Sacramento River system. Design and construction of a positive-barrier fish screen at this diversion will provide immediate benefits to anadromous fish including winter-run, fall-run, late fall-run, and spring run chinook salmon, and steelhead as well as Sacramento splittail and sturgeon. The proposed project has been stipulated by the State Water Resources Control Board and is consistent with the projects identified for implementing the CVPIA Action Program and in CALFED Bay-Delta Programs Stressors and Example Restoration Actions.

e. **Budget Costs and Third Party Impacts** -- The total Phase 1 cost is $49,165. The Phase 2 budget is anticipated to be in the range of $150,000 to $300,000, depending upon the alternative selected. No third-party impacts are anticipated from implementation of the project.

f. **Applicant Qualifications** -- The combined experience and expertise of Richter Brothers in handling and operating equipment together with the professional services provided by Borcalli & Associates, Inc., provide a very well qualified team to manage and perform the work required to complete the proposed project in a timely, cost-effective manner.

g. **Monitoring and Data Evaluation** -- B&A will work with the Anadromous Fish Screen Program (AFSP) Technical Team to formulate and implement a program to test and evaluate the performance of the proposed project.

h. **Local Support/Coordination with other Programs/Compatibility with CALFED objectives** -- The proposed project is identified for implementation in the CVPIA Action Program and is identified in the Stressors and Example Restoration Actions prepared by the Technical Teams that have been working with the CALFED Bay-Delta Program.